CDC Zika IMS Jurisdiction and Partner Sustainment Strategy

Wednesday, March 1, 2017

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Office of Public Health Preparedness and Response

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OVERVIEW

- Opening Remarks
- Task Force Presentations
- Closing Remarks

TELECONFERENCE OVERVIEW	DATE/TIME/LOCATION
Laboratory Task Force **Eddie Ades, Robert Lanciotti, Christy Ottendorfer**	Wed 3/15/2017 / 2pm–3pm EDT - Domestic Wed 3/15/2017 / 5 pm–6 pm EDT - Islands Bridge Line: 1(888)972-6716/ Passcode: 6721430
Joint Information Center/Communications **Erin Connelly**	Wed 3/22/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Epidemiology Task Force **Stacey Martin, Carolyn Gould**	Thurs 3/23/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Vector Issues Team **Janet McAllister, Audrey Lenhart**	Tues 3/28/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Policy and Partnerships **Sue Visser, Melody Stevens**	Wed 3/29/2017 / 1:30pm–2:30pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Pregnancy and Birth Defects Task Force (including surveillance) **Peggy Honein, Dana Meaney-Delman, Suzanne Gilboa**	Wed 3/29/2017 / 3pm–4pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Blood Safety Task Force **Sustainment Strategy Discussions** **Koo Chung, Matt Kuhnert, Craig Hooper**	Thurs 3/30/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Medical Investigations Team **Sustainment Strategy Discussions** **Maleeka Glover**	Thurs 3/30/2017 / 3:30pm–4:30pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430

Speakers for the March 1st "Sustaining the Zika Response in 2017" Presentations

Epidemiology Task Force - **Carolyn Gould**

Pregnancy and Birth Defects Task Force - **Peggy Honein/Dana Meaney-Delman**

Laboratory Task Force - **Eddie Ades/Wendi Kuhnert-Tallman**

Blood Safety Task Force - **Koo-Whang Chung**

Medical Investigations Team - **Maleeka Glover**

Joint Information Center - **Erin Connelly**

Policy & Partnerships - **Sue Visser/Melody Stevens**

Vector Issues Task Force – **John-Paul Mutebi**

Epidemiology Task Force

Zika virus in the United States

- From 2007–2014, 14 Zika virus disease cases identified in US travelers
- With recent outbreaks in the Americas, cases among US travelers increased substantially
- Limited local mosquito-borne transmission identified in two states (Florida and Texas)
- Outbreaks in three US territories (Puerto Rico, US Virgin Islands, and American Samoa)

Duffy et al. N Eng J Med 2009; Hennessey et al. Am J Trop Med Hyg 2016; Armstrong et al. MMWR 2016; Walker et al. MMWR 2016; Likos et al. MMWR 2016; Dirlikov et al. MMWR 2016.

Laboratory-confirmed Zika virus disease cases reported to ArboNET by states or territories — United States, 2015–2017 (as of Feb 15, 2017)

	States N=5,040		Territories N=37,023	
Travel-associated	4,748	(94%)	141	(<1%)
Locally acquired	220	(4%)	36,882	(99%)
Other routes*	72	(1%)	0	(0%)

*Includes sexual transmission (n=44), congenital infection (n=26), laboratory transmission (n=1), and person-to-person through an unknown route (n=1)

http://www.cdc.gov/zika/geo/united-states.html

State of residence for reported Zika virus disease and presumptive viremic blood donor cases — U.S. states, 2015–2017 (as of Feb 15, 2017)

State	Symptomatic disease cases (N=5,040)	Presumptive viremic blood donors† (N=36)
New York	1,020 (21%)	2 (6%)
Florida	1,069* (21%)	24 (67%)
California	420 (9%)	5 (14%)
Texas	306* (6%)	3 (8%)
New Jersey	176 (4%)	0 (0%)
Pennsylvania	173 (4%)	0 (0%)
Maryland	130 (3%)	0 (0%)

† People who reported no symptoms at the time of donating blood, but whose blood tested positive when screened for the presence of Zika virus RNA by the blood collection agency. Some presumptive viremic blood donors develop symptoms after their donation or may have had symptoms in the past. These individuals may be reported as both Zika virus disease cases and presumptive viremic blood donors.

* Include 210 cases in FL and 6 cases in TX acquired through presumed local mosquito-borne transmission

http://www.cdc.gov/zika/geo/united-states.html

ArboNET

CDC

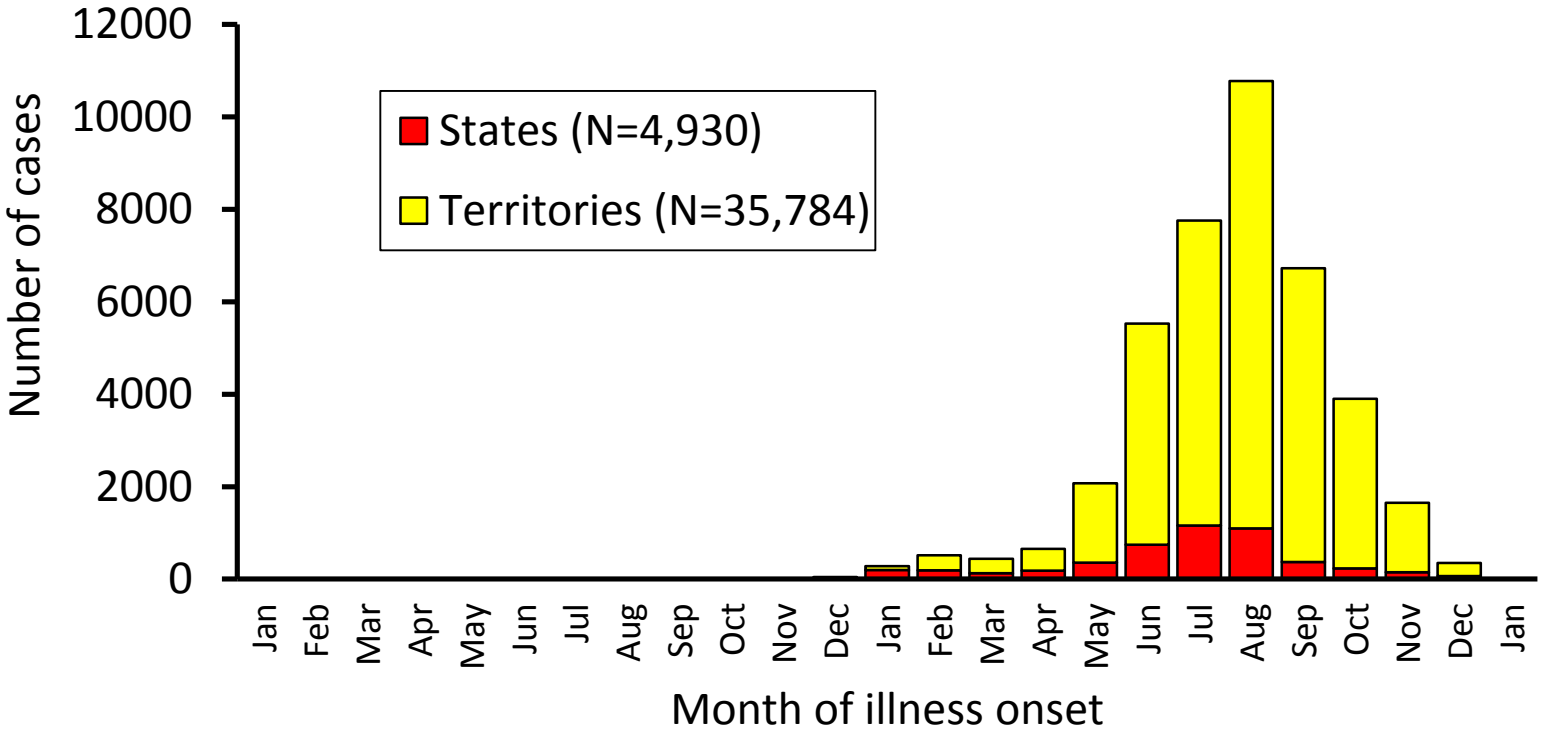
Reported Zika virus disease and presumptive viremic blood donor cases — U.S. territories, 2015–2017 (as of Feb 15, 2017)

Territory	Symptomatic disease cases (N=37,023)	Presumptive viremic blood donors† (N=318)
Puerto Rico	35,930 (97%)	318 (100%)
US Virgin Islands	973 (3%)	0 (0%)
American Samoa	120 (<1%)	0 (0%)

† People who reported no symptoms at the time of donating blood, but whose blood tested positive when screened for the presence of Zika virus RNA by the blood collection agency. Some presumptive viremic blood donors develop symptoms after their donation or may have had symptoms in the past. These individuals may be reported as both Zika virus disease cases and presumptive viremic blood donors.

http://www.cdc.gov/zika/geo/united-states.html

Month of illness onset for Zika virus disease cases — US states and territories, 2015–2017 (as of Jan 25, 2017)



Objectives of Zika virus surveillance in the United States

- Quantify and describe disease burden
- Identify and define areas with local mosquito-borne transmission
- Direct prevention and control efforts
- Identify and monitor infections in people at risk for poor outcomes

Continued reporting of Zika virus diseases cases

- Zika virus disease and infection are nationally notifiable
  - CSTE updated case definitions in 7/2016*
    - Includes non-congenital and congenital infection and disease
- Healthcare providers should continue to report suspected cases to their state or local health department
- State health departments should continue to report laboratory-confirmed cases to CDC according to CSTE case definitions
- Timely reporting allows health departments to assess and reduce the risk of local transmission or mitigate further spread

*http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2016PS/16_ID_01_edited7.29.pdf

Surveillance strategies to identify possible local transmission during mosquito season

- Survey household members and neighbors of travel-associated cases
- Monitor blood donor screening
- Investigate unusual clusters of rash illness in areas at high risk
- Expand testing for people with no known exposure but more specific constellation of clinical findings
  - For example: patient with fever, rash, and conjunctivitis in area with known vector mosquitoes

Preparing for next season

- Reassess risk areas, populations, and timing
- Continue to educate healthcare providers and local public health officials about Zika virus
- Reassess public health laboratory testing and surge capacity
- Revisit testing capacity and reporting with commercial laboratories
- Update response plans with mosquito control districts
- Continue to coordinate with blood collection agencies

Ongoing challenges for the next season

- Optimal and cost effective approaches to identifying local transmission
- Surveillance strategies for determining extent of local transmission
- Defining travel exposure risk (e.g., border region)
- Identifying likely exposure location of confirmed cases
- Diagnostic issues – cross-reactivity, false positives
  - Differential diagnosis may require testing for other pathogens
- Communicating risk and delineation of risk areas
- Timely and appropriate travel and testing guidance
- Correlating human risks with vector surveillance data

Pregnancy and Birth Defects Task Force

What have we learned?

Established that **Zika is a cause** of microcephaly, serious brain defects, and is linked to potentially other birth defects

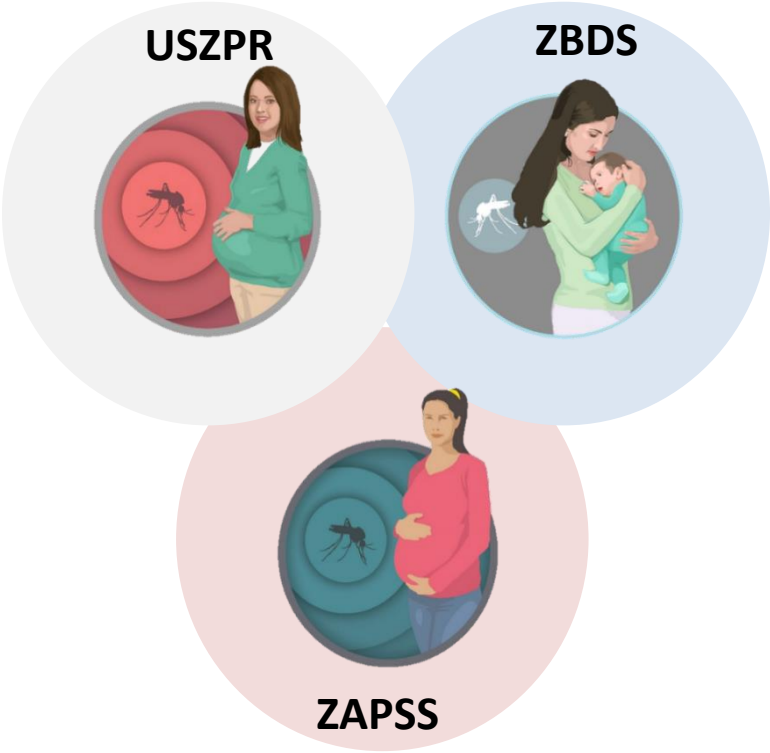
Estimated that among pregnancies with evidence of Zika infection in the 1st trimester, **about 11%** of fetuses and infants had birth defects

Recognized pattern of birth defects associated with Zika virus infection called **congenital Zika syndrome**

Identified that Zika infections during the **1st and 2nd trimester** have been associated with birth defects

What do we hope to learn in the next year?

- Identify full range of health effects among infants with congenital Zika exposure
- Determine optimal Zika virus testing to identify infants with congenital Zika virus infection
- Understand how neuroimaging will help identify infants with adverse effects of congenital Zika infection
- Understand implications of Zika RNA persistence in pregnant women and infants
- Assess risk of other adverse outcomes associated with Zika infection during pregnancy
- Use data to inform clinical management of pregnant women with Zika

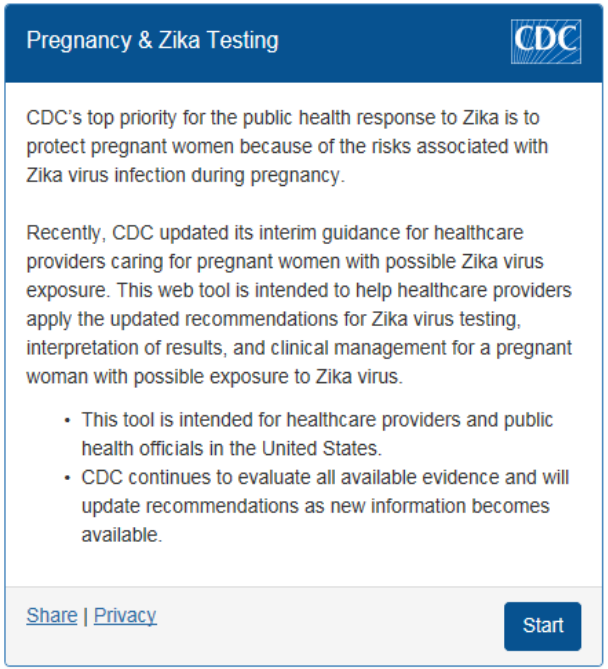


What worked?
Successful Partnerships

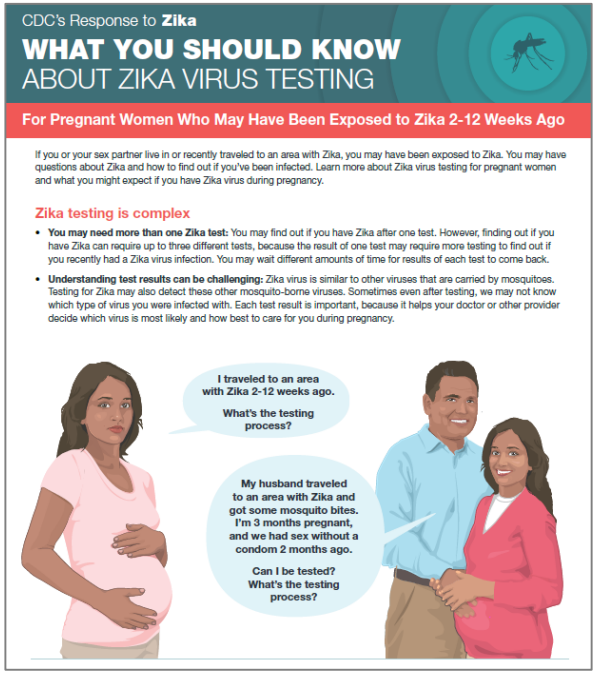
- CDC collaborated with state and local jurisdictions on travel and testing guidance of pregnant women for Health Alert Network (HAN) notices
- Deployed pregnancy and birth defects expert as part of the CDC Emergency Response Team
- Partnered with state and local jurisdictions and local chapters of clinical partner organizations to increase outreach to healthcare providers

What worked?

Development of Clinical Tools and Guidance



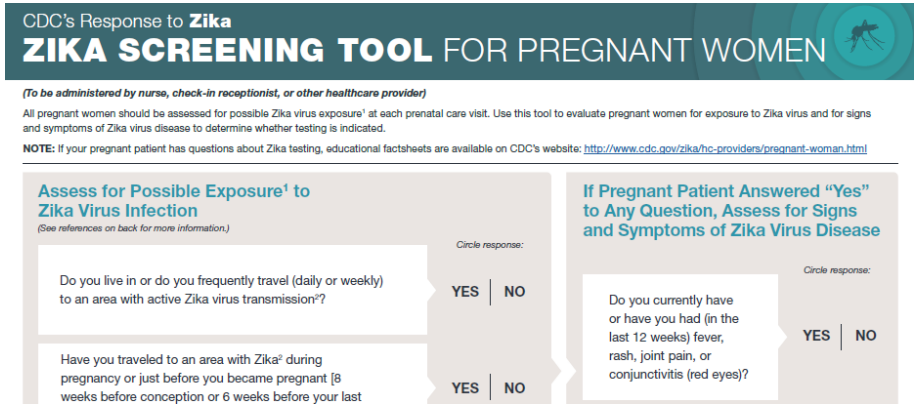
Zika Pregnancy Testing Algorithm



Pretest Counseling Materials

Assessing for Zika During Pregnancy

- All pregnant women should be assessed for possible Zika exposure, signs, and symptoms at each prenatal care visit. They should be asked if they
  - Traveled to or live in an area with active Zika transmission
  - Had sex without a condom with a partner with potential exposure to Zika



CDC's Response to **Zika**

ZIKA SCREENING TOOL FOR PREGNANT WOMEN

(To be administered by nurse, check-in receptionist, or other healthcare provider)

All pregnant women should be assessed for possible Zika virus exposure[1] at each prenatal care visit. Use this tool to evaluate pregnant women for exposure to Zika virus and for signs and symptoms of Zika virus disease to determine whether testing is indicated.

NOTE: If your pregnant patient has questions about Zika testing, educational factsheets are available on CDC's website: http://www.cdc.gov/zika/hc-providers/pregnant-woman.html

Assess for Possible Exposure[1] to Zika Virus Infection

(See references on back for more information.)

Circle response:

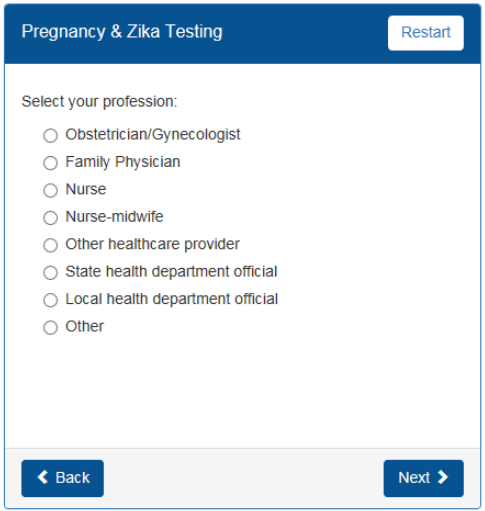
Do you live in or do you frequently travel (daily or weekly) to an area with active Zika virus transmission[2]? — YES | NO

Have you traveled to an area with Zika[2] during pregnancy or just before you became pregnant [8 weeks before conception or 6 weeks before your last — YES | NO

If Pregnant Patient Answered "Yes" to Any Question, Assess for Signs and Symptoms of Zika Virus Disease

Circle response:

Do you currently have or have you had (in the last 12 weeks) fever, rash, joint pain, or conjunctivitis (red eyes)? — YES | NO



Pregnancy & Zika Testing — Restart

Select your profession:

- Obstetrician/Gynecologist
- Family Physician
- Nurse
- Nurse-midwife
- Other healthcare provider
- State health department official
- Local health department official
- Other

Back — Next

Link: http://www.cdc.gov/zika/pdfs/zikapreg_screeningtool.pdf

CDC Recommendations: Who Should be Tested

- Pregnant women with possible exposure to Zika virus and signs or symptoms should be tested for Zika virus infection
- Pregnant women with possible exposure to Zika virus who do not report symptoms also should -tested
- Pregnant women with ongoing risk of Zika virus exposure and who do not report symptoms should be tested in the 1st and 2nd trimesters of pregnancy

http://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm?s_cid=mm6529e1_e

What worked?
Collaboration with Jurisdictions on US Zika Pregnancy Registry & US Zika Birth Defects Surveillance

- Regular reporting and joint publication of findings
- ELC M2: Funding to support US Zika Pregnancy Registry efforts
- Provided funding to support population-based surveillance of birth defects potentially related to Zika virus

Pregnant Women with Any Laboratory Evidence of Possible Zika Virus Infection

US States and the District of Columbia*

1,455

*Includes aggregated data reported to the US Zika Pregnancy Registry as of February 7, 2017

US Territories**

3,156

**Includes aggregated data from the US territories reported to the US Zika Pregnancy Registry and data from Puerto Rico reported to the Zika Active Pregnancy Surveillance System as of February 7, 2017

USZPR Completed Pregnancies

Completed Pregnancies with or without birth defects

1,047

Includes aggregated data reported to the US Zika Pregnancy Registry

USZPR Pregnancy Outcomes

Pregnancy Outcomes in the United States and the District of Columbia

Liveborn infants with birth defects*

43

Includes aggregated data reported to the US Zika Pregnancy Registry as of February 7, 2017

Pregnancy losses with birth defects**

5

Includes aggregated data reported to the US Zika Pregnancy Registry as of February 7, 2017

What worked?

Local Health Department Field Support

16 jurisdictions applied for CDC resource assignee to support:

- Clinical outreach
- Community outreach / health communications
- Medical abstraction
- Data collection, validation, investigation
- Monitoring and follow up
- Referral to services

Laboratory Task Force

Successes

- CDC-developed MAC-ELISA (February 26, 2016) and Trioplex rRT-PCR (March 17, 2016) tests receive first FDA EUA to diagnose Zika virus infection
- CDC continues to manufacture and distribute reagents for these assays domestically and internationally
- CDC laboratories provide confirmatory testing and surge capacity for Zika virus

Laboratory	Number of Specimens Received	Number of Specimens Tested by rRT-PCR	Number of Specimesn Tested by Zika IgM MAC-ELISA
CDC-Atlanta	5,023	3,464	2,827
CDC-Fort Collins	18,262	3,926	15,571
CDC-San Juan	81,667	45,136	48,015
LRN	60,788	25,439	35,349
Total	165,2692	77,965	101,762

Updated 1/2017

Concerns

- **Limited data on viral persistence and impact on testing algorithms**
- **Specificity of diagnostic assays**
  - In-house evaluation of 3 commercial assays with MAC-ELISA as gold standard

Manufacturer	Sensitivity	Specificity
InBios (EUA approved)	82%	85%
NovaTec NovaLisa	70%	98%
Euroimmun	72%	95%

- **Usefulness of PRNT**
  - Crossreactivity due to past flavivirus infections
- **Turn around time from sample receipt to when results reach physicians**
  - Discussions ongoing to pursue HL7 messaging to decrease time from test completion to results being available to a physician

2017 Anticipated Plans

- Provide Zika virus SME and reference laboratory support in Fort Collins
- Maintain surge laboratories for Zika diagnostic testing in Atlanta
- Assist state and territorial laboratories, as needed
- Refine performance of diagnostic assays
- Move testing to commercial laboratories
- New research

Move testing to commercial laboratories

- **Early in response CDC entered into agreements with the 4 nation-wide commercial laboratories**
  - Provided MAC-ELISA reagents free of charge to encourage testing until additional serology assays achieved EUA approval
  - Challenges with reporting and assay performance
- **Movement of testing will decrease surge needs for CDC laboratories**
  - 12 PCR assays currently approved (including Trioplex)
  - 2 IgM assay currently approved (including MAC-ELISA)

New Research: Improvement of Molecular and Serologic Diagnostic Tools for Zika Virus (all CDC laboratories)

- **Improve sensitivity of high-throughput rRT-PCR by specimen volume or type**
  - Studies ongoing to evaluate serum, whole blood and urine to evaluate sensitivity of each
- **Development of a Zika Virus multiplex Bead Assay (IgM/IgG)**
  - Investigation of more specific antibodies
- **Development of rapid and specific IgM diagnostic test using mass spectrometry**
- **Refinement of recombinant antigens in testing platforms to eliminate the need for inactivation of live virus**

Blood Safety Task Force

Blood Safety Task Force

Background on Blood, Organ, and Tissue Collection/Screening

Blood

- Types of collection: whole blood and apheresis
- Types of products: red blood cells, platelets, plasma
- Screening: hepatitis B/C, HIV, human T-lymphotropic virus (HTLV), syphilis, West Nile virus, and Zika virus

Human Cells, Tissues, and Cellular and Tissue-based Products (HCT/Ps)

- Types of products: corneas, bone, skin, heart valves, hematopoietic stem/progenitor cells (HPCs), reproductive tissues, etc.
- Screening: hepatitis B/C, HIV, HTLV, syphilis, cytomegalovirus, chlamydia, gonorrhea

Solid Organs

- Types of products: kidney, heart, liver, etc.

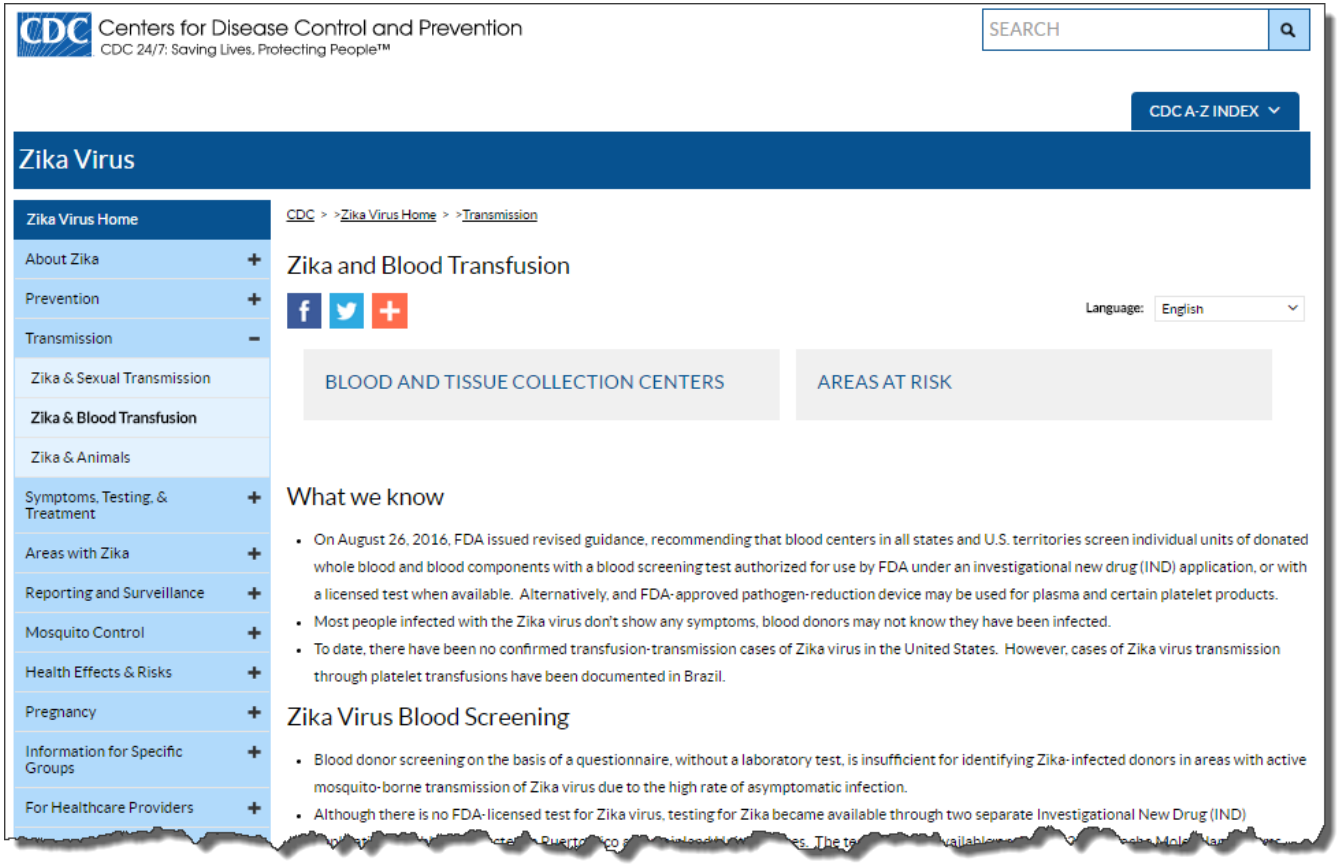
Blood Safety Task Force

Blood Safety

- No confirmed Zika virus transfusion-transmitted cases in the United States
  - Probable Zika virus transfusion-transmitted cases in Brazil
- US Food and Drug Administration (FDA) issued industry guidance on Feb. 2016[1] and revised guidance on Aug 2016[2]
  - Blood collection centers in all states and US territories should perform Zika virus screening on all donations using a screening test authorized for use under an FDA investigational new drug (IND) protocol, or with a licensed test when available; or use an FDA-approved pathogen-reduction device for plasma and certain platelet products

[1] https://www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Blood/UCM486360.pdf
[2] https://www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Blood/UCM518213.pdf

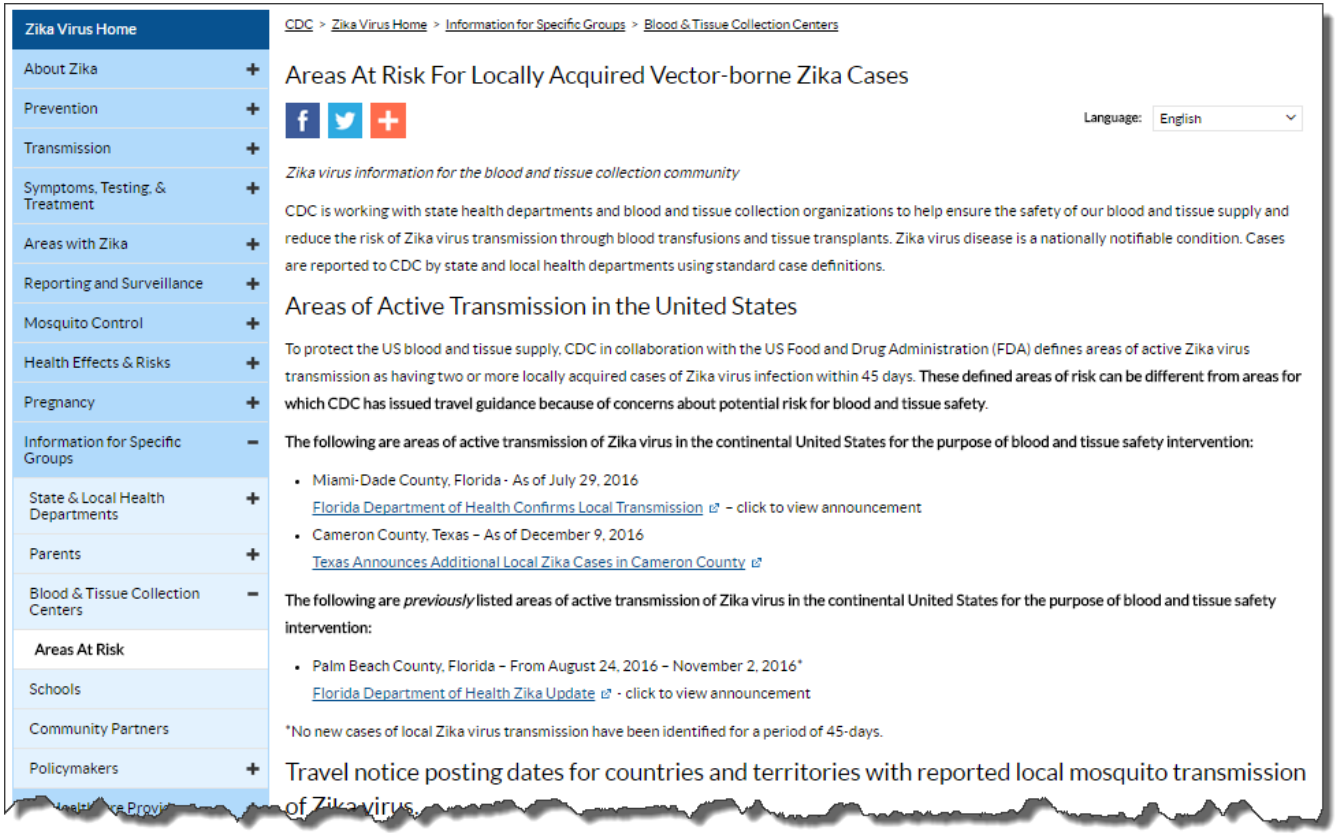
Blood Safety Task Force



https://www.cdc.gov/zika/transmission/blood-transfusion.html

Blood Safety Task Force

The areas listed under “Areas of Active Transmission in the U.S.” can differ from those issued for travel guidance's because of additional concerns about potential risk for tissue safety.



Blood Safety Task Force

Tissue Safety

- FDA's March 2016[1] guidance included Zika virus-related:
  - Recommendations for living donors
  - Recommendations for non-heart-beating (cadaveric) donors

Organ Safety

- No Zika virus guidance has been issued by Health Resources and Services Administration (HRSA), but the Organ Procurement and Transplantation Network (OPTN) issued a statement on Zika virus on July 2016[2]
  - For questions related to ZIKV organ safety, contact the Blood Safety Taskforce at eocevent281@cdc.gov

[1] https://www.fda.gov/downloads/biologicsbloodvaccines/guidancecomplianceregulatoryinformation/guidances/tissue/ucm488582.pdf
[2] https://optn.transplant.hrsa.gov/news/guidance-on-zika-virus/

Blood Safety Task Force

Key Messages

- Blood donation screening can help public health identify new areas of transmission
- State health departments (SHDs) and blood banks should ensure procedures are in place for sharing information regarding positive blood donors
  - Presumptive viremic donors (PVDs) should be reported to ArboNET
- SHDs and tissue banks should strengthen communication regarding Zika virus and tissue donations

Medical Investigations Team

Joint Information Center (JIC)

Joint Information Center

Zika—a threat like no other

- **The most complex communication challenge in CDC (and US public health) history**
  - More risks and more unknowns
  - Diverse audiences, various languages and divided opinions

- **Guiding communication principles for response**
  - Evidence-based communication strategy
  - Coordination and consistency at all levels of government
  - Research to understand audience needs and behaviors in the midst of rapidly changing information
  - Collaboration with the community to inform strategy, mobilize partners, and amplify messages
  - Continuous, real-time evaluation driving adjustments to strategies and tactics

Communication – One Year Later

- Intensive, multisector initiatives, including health marketing and private-sector partnerships, can influence awareness and behaviors
- In some higher risk areas, not all pregnant women are aware of Zika, its effects on health, or how to protect themselves
- Preventive actions most often mentioned by audiences aware of Zika were
  - 1) Wearing repellent
  - 2) Dumping accumulated water
- “Invisibility” of Zika may contribute to complacency among audiences who aren’t personally at risk

Joint Information Center

Communication Strategy

- **ZAP Summit communication planning– Spring 2016**
  - Create a written, strategic communication plan
  - Include goals, objectives, target audiences, tactics, key messages and evaluation metrics
  - Revisit and update the plan throughout the response
  - Currently updating for 2017

- **Incorporate core risk communication principles in the plan**
  - Show empathy
  - Say what you know, what you don't know, and what you're doing to find out
  - Crisis & Emergency Risk Communication (CERC) resources: https://emergency.cdc.gov/cerc

- **Direct all communication activities toward achieving the goals of the plan**

Joint Information Center

Communication Response

- **Coordinate between local, state, and federal entities through clear lines of communication**
  - Harmonize and amplify communication strategy
  - Consistent messaging builds credibility with the public
- **Communicate with the public about the things that are important to them**
  - Understand the public's concerns and respond to them
  - Provide frequent press briefings and media access to the response
- **Strengthen the response through robust engagement with community partners, all types**
  - Those with other points of view can help to identify communication needs and gaps
  - Engaged partners can act as channels to reach other audiences

Joint Information Center

Communication Research

- **Ground your strategy in research**
  - Use convenient and ad hoc information sources to learn about what people do and do not know
    - Monitor local media and social media for themes, misinformation, and gaps
    - Track questions through all public and media inquiry sources (phone calls, emails, social media)
  - Real-time communication research can track message uptake and behavior change

- **Refine the communication strategy based on what you learn**
  - Add or revise tactics, channels, spokespeople, and messages
  - Update and reinforce information through your own channels, the news media, and partners
  - As the response evolves and you (and your audiences) learn more, focus messaging on addressing gaps

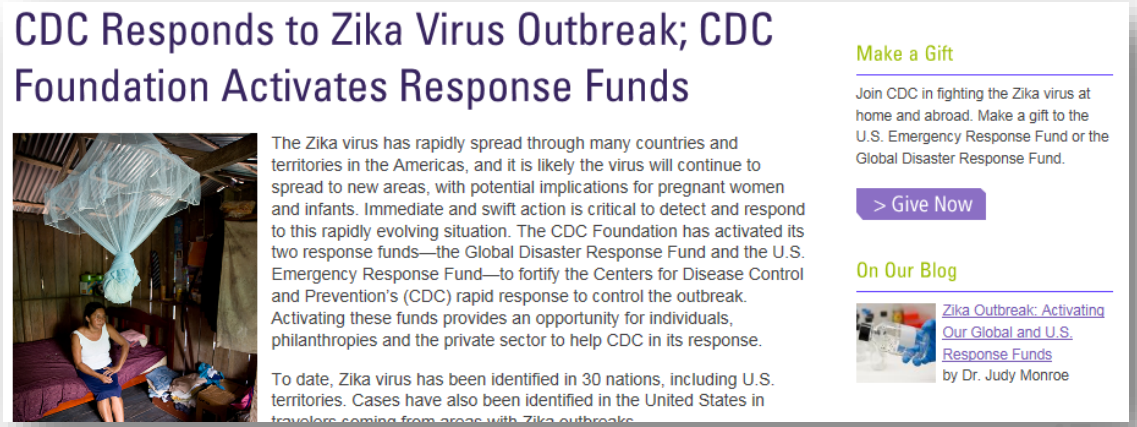
Policy and Partnerships

Partnerships Team Mission

In partnership with the CDC Foundation, CDC continues to grow vital relationships with public and private sector partners

The partnerships team cultivates partnerships in the areas of

- Protecting pregnant women
- Ensuring access to contraception
- Executing a comprehensive vector control program



CDC Responds to Zika Virus Outbreak; CDC Foundation Activates Response Funds

The Zika virus has rapidly spread through many countries and territories in the Americas, and it is likely the virus will continue to spread to new areas, with potential implications for pregnant women and infants. Immediate and swift action is critical to detect and respond to this rapidly evolving situation. The CDC Foundation has activated its two response funds—the Global Disaster Response Fund and the U.S. Emergency Response Fund—to fortify the Centers for Disease Control and Prevention's (CDC) rapid response to control the outbreak. Activating these funds provides an opportunity for individuals, philanthropies and the private sector to help CDC in its response.

To date, Zika virus has been identified in 30 nations, including U.S. territories. Cases have also been identified in the United States in

Make a Gift

Join CDC in fighting the Zika virus at home and abroad. Make a gift to the U.S. Emergency Response Fund or the Global Disaster Response Fund.

> Give Now

On Our Blog

Zika Outbreak: Activating Our Global and U.S. Response Funds
by Dr. Judy Monroe

Zika Prevention Kits

ZAP Summit

Vector Summit

Americas-Region Communication Campaign

Zika Contraception Access Network

Community Engagement

Leveraging Partnerships to Help Decrease the Health Impact of Zika

White House Blog on Zika and Business Engagement

"This is a fight that will continue to require the best we can offer from the government, the private sector, and our communities – and it will require partnerships at every level."

Amy Pope, Immediate Past Deputy Homeland Security Advisor and Deputy Assistant

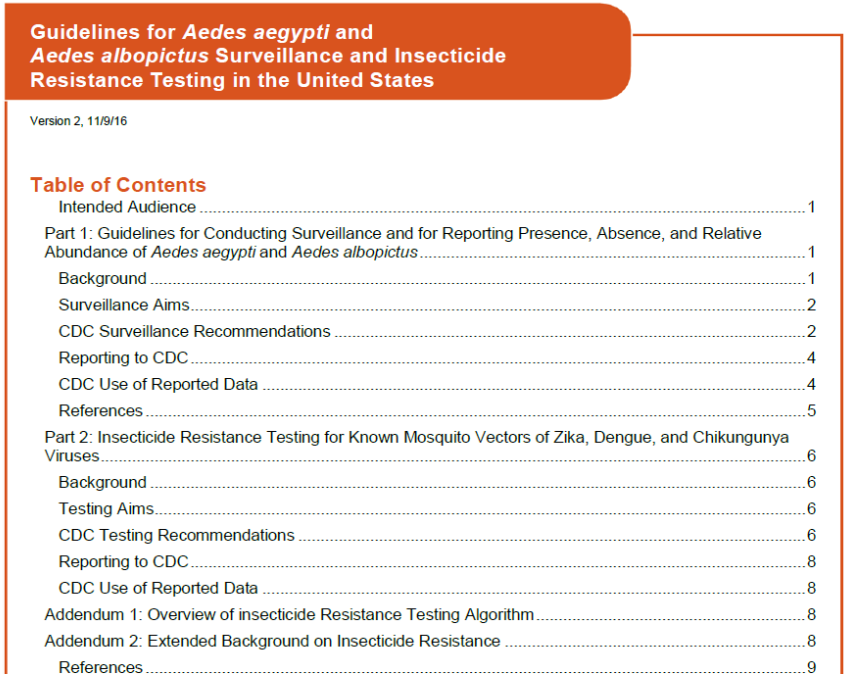
https://www.whitehouse.gov/blog/2016/06/22/update-zika-what-we-do-and-dont-know

https://www.whitehouse.gov/blog/2016/06/22/update-zika-what-we-do-and-dont-know

Vector Issues Task Force

ELC M1 funded *Aedes aegypti/albopictus* surveillance and insecticide resistance testing in the US

- **Funding provided via the ELC M1 mechanism for Zika vector control and surveillance**
  - Aug 2016: FY16 funding ($18M) awarded to 63 entities, including CONUS states as well as some CONUS cities, AK, HI, PR and Territories
  - Dec 2016: FY17 funding ($27M) awarded to 23 entities, mostly southern CONUS states, HI, and territories



Guidelines for *Aedes aegypti* and *Aedes albopictus* Surveillance and Insecticide Resistance Testing in the United States

Version 2, 11/9/16

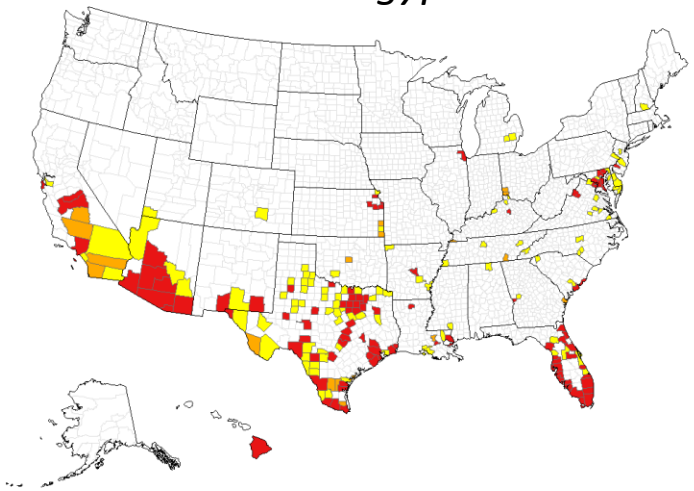
Table of Contents

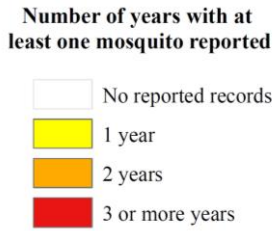
https://www.cdc.gov/zika/pdfs/guidelines-for-aedes-surveillance-and-insecticide-resistance-testing.pdf

Second *Stegomyia* survey

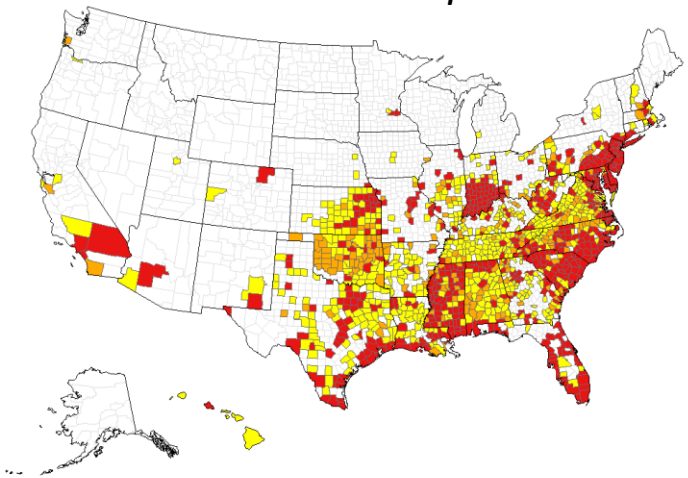
- **Updated survey for county-level records, Jan 1995 to Dec 2016**

Aedes aegypti



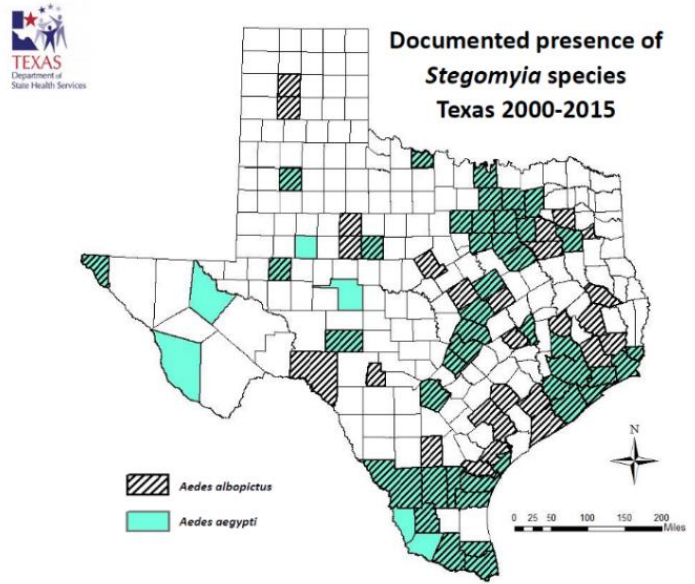


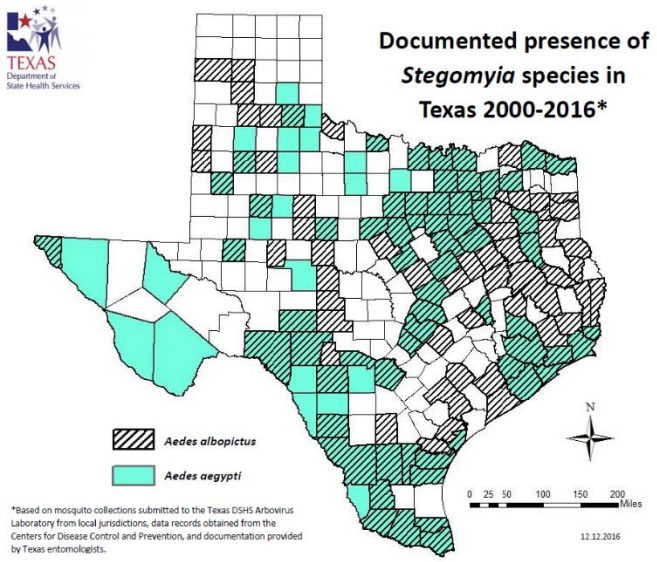
Aedes albopictus



- **Records for *Ae. aegypti* from 220 counties across 28 states and D.C. (38 new counties, mostly in TX, KS, CA; 2 new states, AL, IL)**
- **Records for *Ae. albopictus* from 1,368 counties across 40 states and D.C. (127 new counties, mostly in TX, KS, AR, NC)**

Mosquito surveillance in Texas





141 counties in Texas now have documented presence of one or both *Stegomyia* species (*Ae. aegypti* and *Ae. albopictus*):

- **65 counties have documented the presence of both species**
- **55 counties have documented the presence of *Ae. albopictus* only**
- **21 counties have documented the presence of *Ae. aegypti* only**

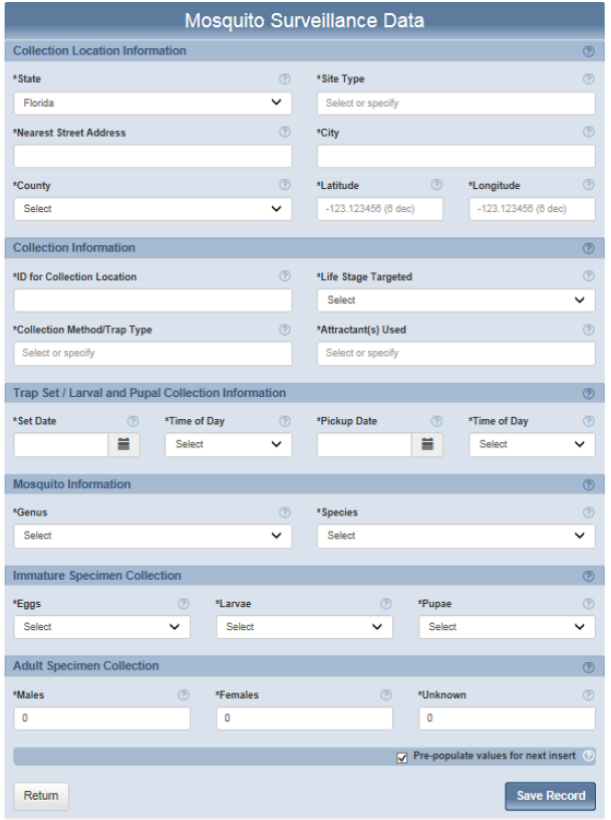
MosquitoNET online mosquito surveillance and insecticide resistance data reporting

MOSQUITONET WEB APPLICATION USER'S GUIDE
VERSION 1.0.2

CENTERS FOR DISEASE CONTROL AND PREVENTION
DIVISION OF VECTOR-BORNE DISEASES

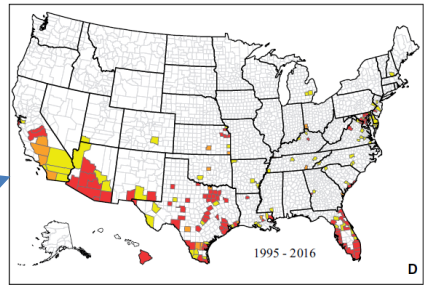
CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

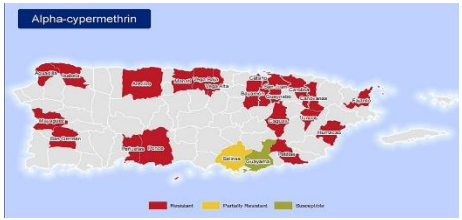
https://www.cdc.gov/zika/vector/vector-control.html



Projected MosquitoNET outputs

- **Key outputs from the data collected and reported to CDC**
  - Moving toward more standardized vector surveillance
    - Improved data/knowledge on the biology of immatures and adults across CONUS, and evaluation of data for specific surveillance methods, should lead to revised, more standardized surveillance schemes
  - Mapping
    - County-based presence of *Ae. aegypti* and *Ae. albopictus*
    - Point locations for collections of *Ae. aegypti* and *Ae. albopictus*
    - County-based insecticide susceptibility/resistance patterns
  - Modeling
    - Sub-county level predictive models for presence of *Ae. aegypti* and *Ae. albopictus*
    - Sub-county level predictive models for abundance of *Ae. aegypti* and *Ae. albopictus*
    - And more…..





Ongoing CONUS mosquito control initiatives

- **New CDC-funded mosquito control initiatives**
  - Regional Centers of Excellence for Vector-Borne Diseases have been funded and are active (FL, TX, NY, WI): **$40M**
  - BARDA call for sole source contract to Evolva to develop EPA-registered natural product (nootkatone)-based mosquito repellents and toxicants closed 2/15: **$9M**
  - Five new mosquito control research projects are being funded (BAA): **$5M**
  - AMCA was funded to strengthen national mosquito control capacity: **$1.6M**
    - Manual for best mosquito management practices has been updated and is available online
    - New online and hands-on mosquito control training programs are nearing completion
    - Master-trainers for these programs will be trained in March

Closing Remarks

TELECONFERENCE OVERVIEW	DATE/TIME/LOCATION
Laboratory Task Force **Eddie Ades, Robert Lanciotti, Christy Ottendorfer**	Wed 3/15/2017 / 2pm–3pm EDT - Domestic Wed 3/15/2017 / 5 pm–6 pm EDT - Islands Bridge Line: 1(888)972-6716/ Passcode: 6721430
Joint Information Center/Communications **Erin Connelly**	Wed 3/22/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Epidemiology Task Force **Stacey Martin, Carolyn Gould**	Thurs 3/23/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Vector Issues Team **Janet McAllister, Audrey Lenhart**	Tues 3/28/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Policy and Partnerships **Sue Visser, Melody Stevens**	Wed 3/29/2017 / 1:30pm–2:30pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Pregnancy and Birth Defects Task Force (including surveillance) **Peggy Honein, Dana Meaney-Delman, Suzanne Gilboa**	Wed 3/29/2017 / 3pm–4pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Blood Safety Task Force **Sustainment Strategy Discussions** **Koo Chung, Matt Kuhnert, Craig Hooper**	Thurs 3/30/2017 / 2pm–3pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430
Medical Investigations Team **Sustainment Strategy Discussions** **Maleeka Glover**	Thurs 3/30/2017 / 3:30pm–4:30pm / Rm 5116 Bridge Line: 1(888)972-6716/ Passcode: 6721430

Thank You!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.